

## TECH+ Certification Test Bank

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## Bank 1

1. A user reports they can sign in to their workstation, but they keep getting “access denied” when trying to open a shared folder that everyone else can read. Which concept best explains the problem?
  - A. Authorization
  - B. Authentication
  - C. Bandwidth
  - D. DHCP
2. Several laptops can print to a local printer and access a shared file server, but none can reach any websites. Which setting is the most likely cause?
  - A. DNS server
  - B. Default gateway
  - C. Folder permissions
  - D. Adapter
3. A user says, “The website loads but looks broken and keeps showing an old version even after I refresh.” What is the best first troubleshooting step from the choices below?
  - A. Update firmware
  - B. Replace the access point (AP)
  - C. Clear the browser cache
  - D. Change the default gateway
4. A staff member receives an email that appears to be from IT and asks them to “verify their password immediately” using a link. What is this most likely an example of?
  - A. Patch management
  - B. Phishing
  - C. Malware
  - D. Incident response
5. A small office wants multiple internal devices to access the internet while using a single public IP address from the ISP. Which technology enables that?
  - A. VPN
  - B. DNS
  - C. NAT
  - D. RAID
6. During troubleshooting, a technician notes that devices are getting incorrect network settings automatically, leading to inconsistent connectivity. Which service

is most directly responsible for assigning those settings?

- A. DHCP
- B. Firewall
- C. VPN
- D. GUI

7. A team is choosing a control to reduce account takeover risk even if some users reuse passwords. Which option best fits?
  - A. Encryption
  - B. MFA
  - C. RAID
  - D. Bandwidth
8. A company wants a control that helps keep stored files protected if a laptop is lost or improperly accessed. Which concept best matches that goal?
  - A. Data in transit
  - B. Integrity
  - C. Data at rest
  - D. Hotspot
9. A user reports they can reach websites by typing the IP address, but not by typing the website name. Which component is most likely involved?
  - A. DNS
  - B. Default gateway
  - C. Ethernet
  - D. CPU
10. A junior tech says, "We have RAID, so we don't need backups." Which response is most accurate based on exam concepts?
  - A. Correct, because RAID is the same as a backup.
  - B. Correct, because RAID prevents malware.
  - C. Incorrect, because RAID is mainly about combining disks for performance or fault tolerance, not replacing backups.
  - D. Incorrect, because RAID only works with cloud computing.

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1. Correct Answer: A. Authorization

Explanation: Authorization is what determines what an authenticated user is allowed to access or do. This fits the scenario because the user can sign in but still cannot open a specific resource.

2. Correct Answer: B. Default gateway

Explanation: The default gateway is the router address a device uses to reach networks outside the local subnet. This matches a situation where local resources work but external internet access does not.

3. Correct Answer: C. Clear the browser cache

Explanation: A browser cache stores local copies of web content and can cause stale or odd site behavior. Clearing it is a common first step when a page looks broken or does not update as expected.

4. Correct Answer: B. Phishing

Explanation: Phishing uses deceptive messages to trick users into revealing information or taking harmful actions. A fake “verify your password” email with a link is a classic example of that pattern.

5. Correct Answer: C. NAT

Explanation: NAT allows many internal private IP addresses to share a single public IP address on the internet. That is exactly the small-network design goal described in the scenario.

6. Correct Answer: A. DHCP

Explanation: DHCP automatically assigns IP settings like the IP address, subnet mask, default gateway, and DNS servers. If those settings are wrong or inconsistent, DHCP is a primary service to check.

7. Correct Answer: B. MFA

Explanation: MFA requires two or more different types of proof, which reduces risk even when passwords are weak or reused. The scenario is specifically about lowering account takeover risk beyond passwords alone.

8. Correct Answer: C. Data at rest

Explanation: Data at rest refers to data stored on a device or storage system. The scenario focuses on protecting stored files, which is a data-at-rest concern.

9. Correct Answer: A. DNS

Explanation: DNS translates human-friendly names into IP addresses. If IPs work but names do not, the symptom points to a name resolution problem consistent with DNS.

10. Correct Answer: C. Incorrect, because RAID is mainly about combining disks for performance or fault tolerance, not replacing backups.

Explanation: RAID combines disks to improve performance, fault tolerance, or both,

depending on the level used. It is commonly tested that RAID is not the same thing as a backup.

## Bank 2

1. A user connects to the office Wi-Fi, but the signal is weak in a far conference room and the connection drops frequently. Which device is most directly responsible for providing Wi-Fi connectivity in the first place?
  - A. Firewall
  - B. Access point (AP)
  - C. CPU
  - D. Hard drive (HDD)
2. After an operating system update, a user's webcam stops working and no longer appears correctly in the system. Which item is the most likely cause?
  - A. Adapter
  - B. Browser cache
  - C. Driver (device driver)
  - D. RAID
3. A remote employee wants to protect their traffic while using public Wi-Fi at a coffee shop. Which option best fits that goal?
  - A. VPN
  - B. NAT
  - C. Default gateway
  - D. Folder permissions
4. A user tries to connect a laptop to a projector but the laptop only has USB-C and the projector only accepts HDMI. What is the most appropriate solution?
  - A. Install a firewall
  - B. Clear the browser cache
  - C. Use an adapter
  - D. Update the ISP
5. During a security event, the first priority is to contain the issue, preserve evidence, communicate appropriately, and restore normal operations. Which concept does this describe?
  - A. Incident response
  - B. Patch management
  - C. Authorization
  - D. Hexadecimal
6. A manager asks for a control to keep customer records from being read by unauthorized people. Which security principle is most directly being protected?

- A. Integrity
  - B. Confidentiality
  - C. Bandwidth
  - D. Frequency
7. A technician is deciding between a full backup and other backup approaches. Which statement best describes a full backup?
- A. It copies only changes since the last backup.
  - B. It copies the entire selected data set at a point in time.
  - C. It only protects data in transit.
  - D. It requires NAT to function.
8. A user can reach the internet, but video calls stutter and large downloads slow down when multiple people are online. Which concept best describes the connection's maximum capacity to carry data?
- A. Bandwidth
  - B. Authentication
  - C. Firmware
  - D. Database
9. A router is configured so that internal devices share one public IP address, but one internal app fails because it expects a consistent inbound mapping that is not configured. Which underlying technology is involved?
- A. RAID
  - B. NAT
  - C. GUI
  - D. Bluetooth
10. A technician needs to decide whether a problem is local or outside the organization. Which party provides the organization's internet connection to the outside world?
- A. ISP (Internet Service Provider)
  - B. DNS (Domain Name System)
  - C. DHCP (Dynamic Host Configuration Protocol)
  - D. Operating system (OS)
- 

1. Correct Answer: B. Access point (AP)
- Explanation: An access point provides Wi-Fi connectivity so wireless devices can join a network. The scenario centers on wireless coverage and connectivity, which points to the AP's role.

2. Correct Answer: C. Driver (device driver)

Explanation: A driver is software that allows an operating system to communicate with specific hardware. A device failing after an update is a common driver-related symptom, often fixed by updating or rolling back the driver.

3. Correct Answer: A. VPN

Explanation: A VPN creates an encrypted tunnel that protects traffic over untrusted networks. The scenario is specifically about protecting data in transit on public Wi-Fi.

4. Correct Answer: C. Use an adapter

Explanation: An adapter allows two different interfaces or standards to work together. This is the practical solution for connecting USB-C output to an HDMI-only projector input.

5. Correct Answer: A. Incident response

Explanation: Incident response is the organized process for detecting, handling, and recovering from security events. The steps described match the exam framing of containing, preserving evidence, and restoring operations.

6. Correct Answer: B. Confidentiality

Explanation: Confidentiality is preventing unauthorized access to information. The scenario is about stopping unauthorized reading of customer records, which is a confidentiality goal.

7. Correct Answer: B. It copies the entire selected data set at a point in time.

Explanation: A full backup is a complete copy of the selected data set at a specific time. Tech+ tests this as a tradeoff because full backups take more time and storage but simplify restoration.

8. Correct Answer: A. Bandwidth

Explanation: Bandwidth is the maximum capacity of a connection to carry data. The stuttering calls and slowdowns under load match a bandwidth bottleneck concept.

9. Correct Answer: B. NAT

Explanation: NAT enables many internal private IP addresses to share a single public IP address. When apps require predictable inbound behavior, NAT-related configuration is often the deciding factor.

10. Correct Answer: A. ISP (Internet Service Provider)

Explanation: An ISP is the company that delivers internet connectivity to a home or



business. The question asks who provides outside connectivity, which is the ISP's role.

## Bank 3

1. A user can browse internal sites by IP address, but most websites fail when they type in the site name. Which component is the most likely issue?
  - A. Firmware
  - B. DNS (Domain Name System)
  - C. RAID
  - D. CPU
2. A laptop contains sensitive local files. The organization wants a control that makes the stored data unreadable without the proper key if the device is stolen. What concept best matches?
  - A. Encryption
  - B. Bandwidth
  - C. GUI
  - D. Frequency
3. A user reports their Bluetooth headset will not connect to their laptop even though it worked yesterday. Which technology is the headset most directly using?
  - A. Ethernet
  - B. Bluetooth
  - C. NAT
  - D. DHCP
4. A technician needs to determine whether a desktop is failing due to storage type limitations. Which device uses spinning platters to store data?
  - A. Hard drive (HDD)
  - B. CPU
  - C. Access point (AP)
  - D. Digital certificate
5. A company wants to ensure information is not changed without permission, especially for reports used in decision-making. Which principle is being protected?
  - A. Confidentiality
  - B. Integrity
  - C. Data in transit
  - D. Database
6. A system uses a digital certificate to help prove identity and enable encrypted web connections. Which idea is most closely associated with what certificates support?
  - A. Authentication

- B. Bandwidth
  - C. Decimal
  - D. Folder permissions
7. Several devices suddenly start receiving incorrect IP settings automatically, causing intermittent connectivity. Which service is responsible for assigning those settings?
- A. DNS (Domain Name System)
  - B. DHCP (Dynamic Host Configuration Protocol)
  - C. VPN
  - D. RAID
8. A user says, “I logged in successfully, but I still can’t install the software I need.” Which concept best explains why access is blocked after login?
- A. Authentication
  - B. Authorization
  - C. Hotspot
  - D. Hexadecimal
9. A technician is deciding whether to use a text-based tool or a graphical tool to troubleshoot a system. Which interface is text-based and command driven?
- A. GUI (Graphical User Interface)
  - B. Command line interface (CLI)
  - C. Firmware
  - D. ISP
10. A user insists their system is “protected because it has RAID,” so they refuse to do backups. Which response best fits exam expectations?
- A. RAID and backups are identical because both prevent data loss.
  - B. RAID replaces backups because it encrypts data at rest.
  - C. RAID can improve fault tolerance or performance, but it does not replace backups.
  - D. RAID only applies to cloud computing, so backups are irrelevant.
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1. Correct Answer: B. DNS (Domain Name System)  
Explanation: DNS translates human-friendly names into IP addresses. If IP addresses work but names do not, the symptom points to a DNS-related name resolution issue.
2. Correct Answer: A. Encryption  
Explanation: Encryption transforms readable data into an unreadable form unless

the correct key is used. The scenario is about protecting stored files if a device is stolen, which is a classic encryption use.

3. Correct Answer: B. Bluetooth

Explanation: Bluetooth is a short-range wireless technology used for peripherals like headsets. The scenario directly describes a headset pairing and connection issue consistent with Bluetooth use.

4. Correct Answer: A. Hard drive (HDD)

Explanation: An HDD stores data on spinning platters using magnetic storage. Tech+ contrasts HDDs with SSDs for performance and failure-mode reasoning in troubleshooting.

5. Correct Answer: B. Integrity

Explanation: Integrity means ensuring data is accurate and not changed without authorization. The scenario focuses on preventing unauthorized changes to information used for decisions.

6. Correct Answer: A. Authentication

Explanation: Digital certificates help prove identity and enable encrypted connections using public key cryptography. In exam terms, that identity-proof aspect aligns most directly with authentication.

7. Correct Answer: B. DHCP (Dynamic Host Configuration Protocol)

Explanation: DHCP automatically assigns IP settings such as the IP address, default gateway, and DNS servers. Incorrect automatically assigned settings strongly indicate a DHCP-related problem.

8. Correct Answer: B. Authorization

Explanation: Authorization determines what an authenticated user is allowed to access or do. The user can log in but cannot perform a specific action, which is an authorization issue.

9. Correct Answer: B. Command line interface (CLI)

Explanation: A CLI is a text-based way to interact with an operating system by typing commands. Tech+ tests recognizing when a CLI is the appropriate tool compared with a GUI.

10. Correct Answer: C. RAID can improve fault tolerance or performance, but it does not replace backups.

Explanation: RAID combines disks to improve performance, fault tolerance, or both

depending on the level used. Tech+ commonly tests that RAID is not the same thing as a backup.

## Bank 4

1. A small office reports that local file sharing works, but users cannot reach external websites. The IP addresses look correct, but traffic never leaves the network. Which configuration is most likely wrong?
  - A. Default gateway
  - B. Folder permissions
  - C. Browser cache
  - D. RAID
2. A user says a business web portal suddenly shows a layout problem and seems stuck on an older page version, even after multiple refreshes. Which action is the best first step?
  - A. Clear the browser cache
  - B. Update firmware
  - C. Replace the ISP
  - D. Change RAID level
3. A remote worker needs to protect their traffic while using hotel Wi-Fi. Which option best addresses that risk?
  - A. DHCP
  - B. VPN
  - C. GUI
  - D. Hexadecimal
4. A device can reach the internet, but video calls degrade whenever multiple people begin streaming at the same time. Which concept best explains the underlying limit?
  - A. Bandwidth
  - B. Integrity
  - C. Authentication
  - D. Binary
5. A user can sign in successfully, but the system blocks them from changing a configuration setting that only administrators should modify. Which concept is being enforced?
  - A. Authentication
  - B. Authorization
  - C. DNS
  - D. Adapter

6. A technician is investigating why a workstation can open local resources but fails when accessing websites by name, even though websites load by IP address. Which component is most likely involved?
    - A. CPU
    - B. DNS
    - C. RAID
    - D. Firmware
  7. A company wants to reduce the risk of account takeover even if some employees reuse passwords. Which control is the best fit?
    - A. Bandwidth
    - B. MFA
    - C. Decimal
    - D. Ethernet
  8. During a device review, an assessor wants to identify which stored data protection applies to files sitting on a laptop drive. Which classification is most relevant?
    - A. Data in transit
    - B. Data at rest
    - C. Frequency
    - D. Hotspot
  9. A user's external display will not connect because the laptop has USB-C but the monitor only accepts HDMI. Which solution is most appropriate?
    - A. Use an adapter
    - B. Update firmware
    - C. Enable DHCP
    - D. Change the default gateway
  10. An employee says, "We have RAID, so we don't need backups." Which statement best matches exam expectations?
    - A. RAID and backups are the same because both prevent all data loss.
    - B. RAID replaces backups because it encrypts the system automatically.
    - C. RAID improves disk fault tolerance or performance, but it does not replace backups.
    - D. RAID only applies to cloud systems, so backups are irrelevant.
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1. Correct Answer: A. Default gateway

Explanation: The default gateway is the router address a device uses to reach

networks outside the local subnet. If local resources work but external sites do not, a wrong or missing default gateway is a likely cause.

2. Correct Answer: A. Clear the browser cache

Explanation: The browser cache stores local copies of web content and can cause stale pages or odd display behavior. Clearing it is a common first troubleshooting step for “old version” or broken layout symptoms.

3. Correct Answer: B. VPN

Explanation: A VPN creates an encrypted tunnel that protects traffic over untrusted networks. Hotel Wi-Fi is an untrusted network scenario, so VPN is the best fit from the options.

4. Correct Answer: A. Bandwidth

Explanation: Bandwidth is the maximum capacity of a connection to carry data. Performance dropping under heavy simultaneous use fits a bandwidth bottleneck.

5. Correct Answer: B. Authorization

Explanation: Authorization controls what an authenticated user is allowed to do. Being able to sign in but not change an admin-only setting is an authorization restriction.

6. Correct Answer: B. DNS

Explanation: DNS translates human-friendly names into IP addresses. If IP access works but name-based access fails, the issue is most consistent with DNS resolution.

7. Correct Answer: B. MFA

Explanation: MFA requires two or more different types of proof and reduces risk even when passwords are weak or reused. The scenario is specifically about reducing account takeover beyond passwords alone.

8. Correct Answer: B. Data at rest

Explanation: Data at rest is data stored on a device or storage system. Files sitting on a laptop drive are an example of data at rest.

9. Correct Answer: A. Use an adapter

Explanation: An adapter allows two different interfaces or standards to work together. USB-C to HDMI is a common interface mismatch solved by an adapter.

10. Correct Answer: C. RAID improves disk fault tolerance or performance, but it does not replace backups.

Explanation: RAID combines disks for performance, fault tolerance, or both



depending on the level used. It is not the same as a backup, so backups are still needed.

## Bank 5

1. A user reports that a business application works on the office network, but the same application fails from home even though the user can browse the internet. The help desk suspects traffic is being blocked by rules. Which control is most directly involved?
  - A. RAID
  - B. Browser cache
  - C. DHCP
  - D. Firewall
2. A company wants a consistent way to acquire, test, deploy, and track updates that fix bugs and security issues across endpoints. Which concept best matches that practice?
  - A. Patch management
  - B. Authorization
  - C. Bandwidth
  - D. Hexadecimal
3. A technician updates a router and the device becomes more stable and secure, even though no “app” was updated on any computer. What kind of update best describes this?
  - A. Driver update
  - B. Firmware update
  - C. Full backup
  - D. Adapter update
4. A new technician keeps solving the same recurring issues differently each time because prior fixes were not recorded. Which concept best addresses this problem?
  - A. Confidentiality
  - B. VPN
  - C. Documentation
  - D. Data in transit
5. Multiple devices on a network are receiving incorrect IP settings automatically, causing intermittent connectivity across the office. Which service is most directly responsible for assigning those settings?
  - A. DNS
  - B. Firewall

- C. ISP
- D. DHCP

6. A user complains that their Wi-Fi works well near the access point but drops in a distant office with lots of walls. From the choices below, which wireless concept best relates to range and interference tradeoffs?
  - A. Frequency
  - B. Decimal
  - C. Database
  - D. Folder permissions
7. A video editor's laptop performs better when connected with a cable than on Wi-Fi, and the connection is more stable during large file transfers. Which technology best matches the wired standard being used?
  - A. Bluetooth
  - B. Hotspot
  - C. Ethernet
  - D. DNS
8. A small business chooses to use computing resources delivered over a network rather than running everything on local hardware. Which concept best describes this approach?
  - A. Compiled language
  - B. Cloud computing
  - C. CLI
  - D. Full backup
9. A technician is troubleshooting a printer that cannot be reached on the network. They first confirm the numeric identifier used by devices to communicate. Which item are they checking?
  - A. GUI
  - B. Chatbot
  - C. RAID
  - D. IP address
10. A reporting system stores organized records so that information can be retrieved and managed reliably for queries and outputs. Which term best matches this?
  - A. Database
  - B. Bandwidth

C. Authentication  
D. Hotspot

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1. Correct Answer: D. Firewall

Explanation: A firewall allows or blocks network traffic based on rules. The scenario points to rule-based blocking when the same app behaves differently across networks.

2. Correct Answer: A. Patch management

Explanation: Patch management is the practice of acquiring, testing, deploying, and tracking updates. The scenario describes that full lifecycle of updates and accountability.

3. Correct Answer: B. Firmware update

Explanation: Firmware is low-level software stored on a device that helps it operate. Updating firmware is a device-level change that can improve stability or security without changing user applications.

4. Correct Answer: C. Documentation

Explanation: Documentation records system information, configurations, and troubleshooting outcomes. The scenario shows repeated issues because prior fixes were not captured for reuse.

5. Correct Answer: D. DHCP

Explanation: DHCP automatically assigns network settings such as IP address, default gateway, and DNS servers. Incorrect automatically assigned settings are a direct clue that DHCP is involved.

6. Correct Answer: A. Frequency

Explanation: Frequency is the radio band used by wireless networks and relates to range and interference behavior. The scenario is about distance, walls, and reliability, which are classic frequency tradeoff cues.

7. Correct Answer: C. Ethernet

Explanation: Ethernet is a wired networking standard used for reliable local network connections. The scenario contrasts wired stability and throughput against Wi-Fi behavior during large transfers.

8. Correct Answer: B. Cloud computing

Explanation: Cloud computing delivers computing resources and services over a

network instead of local hardware. The scenario describes choosing network-delivered resources rather than on-prem devices.

9. Correct Answer: D. IP address

Explanation: An IP address is the numeric identifier that enables devices to communicate on a network. Confirming that identifier is a basic first step when a device cannot be reached.

10. Correct Answer: A. Database

Explanation: A database is an organized collection of data designed for storage, retrieval, and management. The scenario describes structured records that support queries and reporting outputs.